

### III. REMARKS

This amendment is responsive to the Office Action mailed September 7, 2006 in regard to the above-identified patent application. Claim 1 has been amended. Claim 4 has been cancelled. Claims 1 through 3 are now pending in this application.

Claim 1 was rejected under 35 U.S.C. 102(e) as being anticipated by Chazen (U.S. Patent 6,752,966).

Claim 1 was rejected under 35 U.S.C. 103(a) as being unpatentable over Chazen (U.S. Patent 6,752,966) in view of Noguchi et al. (U.S. Patent 5,784,417).

Claim 1 was rejected under 35 U.S.C. 103(a) as being unpatentable over Noguchi et al. (U.S. Patent 5,784,417) in view of Chazen (U.S. Patent 6,752,966).

Claim 1 recites a process for forming a thermal print head die module having a bonded pair of substrates comprising applying a thin coating of a heat-curable, photopatternable epoxy polymer composition to a lower heater substrate. Claim 1 further calls for drying said coating to form a semi-solid adhesive layer, photoexposing said semi-solid adhesive layer, through a mask, and polishing said semi-solid adhesive layer and developing passageways therethrough, to form a patterned adhesive fluidic ink epoxy layer.

Chazen (U.S. Patent 6,752,966) discloses a method of manufacturing a microfabricated channel network for a microfluidic device. The microfluidic devices are disclosed

applicable to biological and chemical research, pharmaceutical screening, chemical synthesis and analysis, diagnostics, environmental analysis and the like. The disclosed method includes providing a planar substrate, depositing a polymer layer on the surface of the first substrate, removing a portion of the polymer layer to provide one or more grooves corresponding to a desired channel pattern and overlying a second substrate on the polymer layer to seal the one or more grooves.

Noguchi et al. (U.S. Patent 5,784,417) discloses a process for producing a liquid jet recording head. The liquid jet recording head has a substrate, a liquid path wall and a cover laminated to the liquid path wall. The liquid path wall is disclosed as comprising a resin cured film patterned to a predetermined shape according to photolithographic steps.

Nowhere in Chazen (U.S. Patent 6,752,966), either alone or in combination with Noguchi et al. (U.S. Patent 5,784,417) is there a disclosure or suggestion of a process for forming a thermal print head die module having a bonded pair of substrates as claimed in claim 1. Instead, Chazen (U.S. Patent 6,752,966) discloses method of manufacturing a microfabricated channel network for an individual microfluidic device which is different than a thermal print head die module as claimed in claim 1. Noguchi et al. (U.S. Patent 5,784,417) does not correct the failure in Chazen and only discloses a process for producing an individual liquid jet recording head which is different than a thermal print head die module as claimed in claim 1.

Nowhere in Chazen (U.S. Patent 6,752,966), either alone or in combination with Noguchi et al. (U.S. Patent 5,784,417) is there a disclosure or suggestion of applying a thin coating of a heat-

curable, photopatternable epoxy polymer composition to a lower heater substrate and drying the coating to form a semi-solid adhesive layer as claimed in claim 1. Instead, Chazen (U.S. Patent 6,752,966) discloses applying a photoimagable polymer to a substrate layer with no disclosure or suggestion of the substrate being a heater substrate as claimed in claim 1. Similarly, Noguchi et al. (U.S. Patent 5,784,417) discloses utilizing an epoxy resin with no disclosure or suggestion of drying the coating on the heater substrate to form a semi-solid adhesive layer as claimed in claim 1.

Nowhere in Chazen (U.S. Patent 6,752,966), either alone or in combination with Noguchi et al. (U.S. Patent 5,784,417) is there a disclosure or suggestion of photoexposing the semi-solid adhesive layer, through a mask, polishing said semi-solid adhesive layer and developing passageways therethrough, to form a patterned adhesive fluidic ink epoxy layer as claimed in claim 1. Instead, Chazen (U.S. Patent 6,752,966) discloses bonding the second substrate to the polymer layer with no disclosure of polishing the polymer layer. Instead, Noguchi et al. (U.S. Patent 5,784,417) discloses the cover being bonded to the liquid path wall with no disclosure of polishing the liquid path wall. Here, both Chazen (U.S. Patent 6,752,966) and Noguchi et al. (U.S. Patent 5,784,417) have no disclosure or suggestion of a semi-solid adhesive layer or polishing an adhesive layer as claimed in claim 1.

Additionally, there is no motivation to combine Chazen (U.S. Patent 6,752,966) or Noguchi et al. (U.S. Patent 5,784,417). Here, Chazen (U.S. Patent 6,752,966) relates to microfluidic devices applicable to biological and chemical research,

pharmaceutical screening, chemical synthesis and analysis, diagnostics, environmental analysis and the like (see column 4, lines 6 -16). In stark contrast, Noguchi et al. (U.S. Patent 5,784,417) relates to liquid jet recording heads and a recording apparatus by use thereof.

The features of claim 1 are neither disclosed or suggested by Chazen (U.S. Patent 6,752,966). Accordingly, claim 1 is patentable over Chazen (U.S. Patent 6,752,966).

The features of claim 1 are neither disclosed or suggested by Chazen (U.S. Patent 6,752,966) or Noguchi et al. (U.S. Patent 5,784,417) either alone or in combination. Accordingly, claim 1 is patentable over Chazen (U.S. Patent 6,752,966) in view of Noguchi et al. (U.S. Patent 5,784,417).

The features of claim 1 are neither disclosed or suggested by Noguchi et al. (U.S. Patent 5,784,417) or Chazen (U.S. Patent 6,752,966) either alone or in combination. Accordingly, claim 1 is patentable over Noguchi et al. (U.S. Patent 5,784,417) in view of Chazen (U.S. Patent 6,752,966) Chazen (U.S. Patent 6,752,966).


Claims 2 and 3 depend upon claim 1. For the reasons set forth above relating to claim 1, the features of claims 2 and 3 patentable.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should

any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 50-0510.

Respectfully submitted,

  
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